This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1(original). Polynucleotide which codes for a protein with trans-sialidase activity and can be isolated from *Trypanosoma congolense*.

2(original). Polynucleotide in accordance with claim 1, which codes for a protein with trans-sialidase activity and which catalyses the transfer of sialic acid from a donor onto an acceptor molecule.

3(currently amended). Polynucleotide in accordance with claim 1 [[or 2]], comprising a nucleic acid sequence in accordance with SEQ ID NO: 1 or 3, or fragments of the same, which comprise at least 15 connected nucleotide residues; the polynucleotides and fragments complementary to the same; and the nucleotide sequences derived from these polynucleotides by degeneration of the genetic code.

4(currently amended). Oligonucleotide which hybridises with a polynucleotide in accordance with ~~one of the previous claims~~ claim 1, in particular under stringent conditions.

5(original). Polynucleotide which hybridises with an oligonucleotide in accordance with claim 4, in particular under stringent conditions, and codes for a gene product of micoorganisms of the Trypanosoma genus.

6(currently amended). Polypeptide which is coded by a polynucleotide which comprises a nucleic acid sequence in accordance with ~~any of the claims 1 to 3 or 5~~ claim 1; or which has an amino acid sequence which comprises at least 10 connected

amino acids in accordance with SEQ ID NO: 2 or 4; and functional equivalents of the same which have trans-sialidase activity.

7(original). Trans-sialidase or functional equivalents of the same with trans-sialidase activity, characterised by one of the following amino acid part sequences: TDTVKYSTDGGRTWKREVIIPNGR (pos. 1 to 25 in accordance with SEQ ID NO: 2) FRIPSLVEIDGVLIATFDTRYLRASDSSLI (pos. 1 to 30 in accordance with SEQ ID NO: 4).

8(original). Trans-sialidase 1 (TS1) characterised by at least one of the following characteristics:

Nucleotide sequence	SEQ ID NO: 1
Amino acid sequence	SEQ ID NO: 2
Temperature optimum	30-40°C
pH optimum	pH 6.5-8.5
Isoelectric point	pH 4-5
Molecular weight, native	400-600 kDa
Molecular weight in the reducing SDS page	90 kDa

9(original). Trans-sialidase 2 (TS2), characterised by at least one of the following characteristics:

Nucleotide sequence	SEQ ID NO: 3
Amino acid sequence	SEQ ID NO: 4
Temperature optimum	30-40°C
pH optimum	pH 6.5-8.5
Isoelectric point	pH 5-6
Molecular weight, native	120-180 kDa
Molecular weight in the reducing SDS page	90 kDa

10(currently amended). Material in accordance with ~~any of the claims 1 to 9~~ claim 1, derived from the *Trypanosoma congolense* organism.

11(currently amended). Materials in accordance with ~~any of the claims 1 to 9~~ claim 1, produced using synthetic, in particular chemical, biochemical, enzymatic, gene technological and transgenic methods.

12(currently amended). Functional equivalent of a trans-sialidase in accordance with ~~either of the claims 8 and 9~~ claim 8, the amino acid sequence or part sequence of which has a sequence sameness of at least 50 % or at least 60 %, in particular at least 65 % or at least 70 %, such as eg. 75 %, 80%, 85 %, 90 %, 95 %, 98 % or 99% to the corresponding amino acid sequence or part sequence in accordance with SEQ ID NO: 2 or 4, calculated according to the algorithm of Pearson and Lipman, Proc. Natl. Acad, Sci. (USA) 85(8), 1988, 2444-2448; or which contains one or more deletions, additions, substitutions or inversions of an individual or of several amino acid residues or shows a changed glycosylation pattern; whereby the capability of catalysis of the transfer of sialic acids from a donor to an acceptor is maintained.

13(currently amended). Expression cassette, comprising, in operative connection with at least one regulative nucleic acid sequence, a nucleic acid sequence in accordance with ~~any of the claims 1 to 5~~ claim 1.

14(original). Recombinant vector, comprising at least one expression cassette in accordance with claim 13.

15(original). Procaryotic or eucaryotic host, transformed with at least one vector in accordance with claim 14.

Claim 16(canceled).

17(currently amended). Method for the enzymatic sialization of an acceptor molecule, characterised in that the acceptor molecule is incubated with a donor containing sialic acid residues in the presence of an enzyme in accordance with ~~any of the claims 6 to 12~~ claim 6, and the sialated acceptor is isolated.

18(original). Method in accordance with claim 17, characterised by at least one more of the following properties:

a) the donor is chosen from sialic acids bonded to oligosaccharides, polysaccharides, polysialic acids, glycoproteins and glycolipids, such as in particular lactoferrins, glycolysated whey proteins and caseins, and fragments of the same;

b) the acceptor is chosen from polymers containing ß-galactose, such as ß-galactooligosaccharides, lactitol, lactobionic acid, methyl-ß-lactoside, acetyllactosamines, galactopyranosides, trans-galactooligosaccharides, polygalactose and other glycoconjugates with terminally bonded ß(1-3) or ß(1-4) galactose or galactose.

Claims 19-22(canceled).

23. Effector of the trans-sialidase activity of a trans-sialidase in accordance with ~~any of the claims 6 to 12~~ claim 6, chosen from

a) polypeptide ligands which interact with a trans-sialidase ~~in accordance with any of the claims 6 to 12~~;

b) low molecular effectors which modulate the biological activity of a trans-sialidase ~~in accordance with any of the claims 6 to 12~~; and

c) antisense nucleic acid sequences of a nucleic acid sequence ~~in accordance with any of the claims 1 to 5.~~

Claim 24(canceled).

25(original). Method for the isolation of an enzyme with trans-sialidase activity, whereby

a) *Trypanosoma congolense* is cultivated in a medium,

b) and the desired product is isolated from the culture supernatant by means of ion exchange chromatography with the help of a salt gradient, if required followed by isoelectric focussing, gel filtration, affinity chromatography and/or protein precipitation.

26(original). Pharmaceutical or gene-therapeutical means, containing in a pharmaceutically or gene-therapeutically compatible carrier at least one effector in accordance with claim 23.